

REMARKS

Claims 1, 4, 5, 7, 9, 10, 13, 14, 16 and 18 are pending in this application. By this amendment, Applicants amend claims 1, 5, 9, 10, 16 and 18.

Applicants greatly appreciate the courtesies extended by the Examiner in the telephone interview of September 4, 2002.

Claims 1, 4, 5, 7, 9, 10, 13, 14, 16 and 18 were rejected under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite. Applicants have amended claims 1, 5, 9, 10, 16 and 18 in accordance with the telephone interview of September 4, 2002 to overcome the informalities noted by the Examiner. Regarding claim 5, as discussed in the telephone interview, the recitation of "said at least one step comprises a pair of steps..." clearly further limits the claimed invention by further limiting "at least one step", which could include 1, 2, 3 or more steps, to "a pair of steps", which clearly includes 2 steps. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 1, 4, 5, 7, 10, 13, 14 and 16 were rejected under 35 U.S.C. § 103(a) as being anticipated by Ago et al. (U.S. 5,684,437) in view of Horiuchi et al. (U.S. 6,377,139). And claims 9 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ago et al. in view of Horiuchi et al., and further in view of Kadota et al. (U.S. 6,163,099). Applicants respectfully traverse these rejections.

Horiuchi et al. is a proper reference, if at all, only under 35 U.S.C. § 102(e) as it was issued after the U.S. filing date of the present application. Horiuchi et al. and the present application were, at the time the invention was made, owned by the same company or subject to an obligation of assignment to the same company, namely Murata Manufacturing Co., Ltd. Pursuant to 35 U.S.C. § 103(c), therefore, Horiuchi et al. cannot be cited as prior art against any claims of the present application under 35 U.S.C. § 103(c). Therefore, Applicants submit herewith a Declaration under 37 C.F.R. § 1.130 in order to disqualify Horiuchi et al. as a prior art reference under 35 U.S.C. § 103(c). Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of 1, 4, 5, 7, 10, 13, 14 and 16 over Ago et al. in view of Horiuchi et al., and

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claims 9 and 18 over Ago et al. in view of Horiuchi et al., and further in view of Kadota et al.

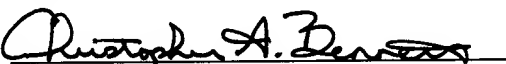
In view of the foregoing remarks, Applicants respectfully submit that claim 1, 4, 5, 7, 9, 10, 13, 14, 16 and 18 are allowable.

In view of the foregoing Amendment and Remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. A surface acoustic wave device comprising:
a longitudinally coupled resonator filter including:

a piezoelectric substrate having a pair of substrate edges and an upper surface therebetween and including a main region and a bottom surface, the piezoelectric substrate having at least one step formed therein and extending from one of [the] said pair of substrate edges to an inner edge of the at least one step located spaced from the one of the pair of substrate edges, [and] the inner edge of the at least one step being arranged to contact the main region and to extend from the upper surface toward the bottom surface of the piezoelectric substrate inside the one of the pair of substrate edges;

at least two interdigital transducers provided on the main region of the piezoelectric substrate such that shear horizontal type surface acoustic waves excited by the interdigital transducer and having a wavelength of λ are reflected by the at least one inner edge;

wherein a distance L between the inner edge of the at least one step and the corresponding one of the substrate edges is in the range of about $\lambda/10$ to about 8λ , and a depth of the at least one step is in the range of about 2λ to about 6λ .

5. A surface acoustic wave device according to claim 1, wherein said at least one step comprises a pair of steps arranged such that said inner edges of said pair of steps are substantially parallel to the substrate edges and extending from the upper surface toward the bottom surface of the piezoelectric substrate.

9. A surface acoustic wave device according to claim [8] 1, wherein the at least two [IDTs] interdigital transducers include a plurality of electrode fingers, and if the wavelength of the surface acoustic wave is represented by λ , the widths of the

outermost electrode fingers of the at least two IDTs are approximately $\lambda/8$ and the widths of all of the other electrode fingers are approximately $\lambda/4$.

10. A communication device comprising:

at least one surface acoustic wave device including:

a longitudinally coupled resonator filter comprising:

a piezoelectric substrate having a pair of substrate edges and an upper surface therebetween and including a main region and a bottom surface, the piezoelectric substrate having at least one step formed therein and extending from one of [the] said pair of substrate edges to an inner edge of the at least one step located spaced from the one of the pair of substrate edges, [and] the inner edge of said at least one step being arranged to contact the main region and to extend from the upper surface toward the bottom surface of the piezoelectric substrate inside the one of the pair of substrate edges;

at least two interdigital transducers provided on the main region of the piezoelectric substrate such that shear horizontal type surface acoustic waves excited by the interdigital transducer and having a wavelength of λ are reflected by the at least one inner edge;

wherein a distance L between the inner edge of the at least one step and the corresponding one of the substrate edges is in the range of about $\lambda/10$ to about 8λ , a depth of the at least one step is in the range of about 2λ to about 6λ .

16. A communication device according to claim [15] 14, wherein the [inside surfaces] inner edge defines a reflection [edges] edge for reflecting the shear horizontal type surface acoustic wave.

18. A communication device according to claim [17] 14, wherein the at least two [IDTs] interdigital transducers include a plurality of electrode fingers, and if the wavelength of the surface acoustic wave is represented by λ , the widths of the outermost electrode fingers of the at least two IDTs are approximately $\lambda/8$ and the widths of all of the other electrode fingers are approximately $\lambda/4$.